

## BIOGRAPHICAL SKETCH

Christopher J. Hennigan, Associate Professor

Email: (b) (6)

### PROFESSIONAL PREPARATION:

School	Major	Degree/Year
University of Florida, Gainesville, FL	Chemistry	B.S./2001
Georgia Institute of Technology, Atlanta, GA	Environmental Eng.	M.S./2006
Georgia Institute of Technology, Atlanta, GA	Environmental Eng.	PhD/2008
Carnegie Mellon University, Pittsburgh, PA	Postdoctoral Researcher in the Center for Atmospheric Particle Studies	2008-2012

### APPOINTMENTS

- 2018 – pres., Associate Professor, Department of Chemical, Biochemical and Environmental Engineering, University of Maryland, Baltimore County  
2012 – 2018, Assistant Professor, Department of Chemical, Biochemical and Environmental Engineering, University of Maryland, Baltimore County  
2001 – 2003, Analytical Chemist, Westinghouse Savannah River Company (DoE contractor), Aiken, SC

### PUBLICATIONS (out of 51 total; full list:

<https://scholar.google.com/citations?user=pJCpTcoAAAAJ&hl=en>

### 5 Products Most Closely Related to Project

- 1) Reed, B. E.; Yalamanchili, J.; Leach, J. B.; Hennigan, C. J., Fate of transition metals in PO<sub>4</sub>-based *in vitro* assays: equilibrium modeling and macroscopic studies, *Environmental Science: Processes and Impacts*, 23, 160 (2021).
- 2) \*Hennigan, C.J.; Mucci, A.; Reed, B. E.; Trends in PM<sub>2.5</sub> transition metals in urban areas across the United States, *Environmental Research Letters*, 14, 104006 (2019).
- 3) El-Sayed, M. M. H., Amenumey, D., \*Hennigan, C. J., Drying-Induced Evaporation of Secondary Organic Aerosol during Summer, *Environmental Science & Technology*, 50 (7), 3626-3633 (2016).
- 4) El-Sayed, M. M. H., Wang, Y., \*Hennigan, C. J., Direct atmospheric evidence for the irreversible formation of aqueous secondary organic aerosol (aqSOA), *Geophysical Research Letters*, doi:[10.1002/2015GL064556](https://doi.org/10.1002/2015GL064556) (2015).
- 5) \*Hennigan, C. J., Izumi, J., Sullivan, A. P., Weber, R. J., Nenes, A., A critical evaluation of proxy methods used to estimate the acidity of atmospheric particles, *Atmospheric Chemistry and Physics*, 15, 2775-2790 (2015).

### 5 Other Significant Products

- 6) Pratap, V., Battaglia Jr., M.A., Carlton, A.G., \*Hennigan, C.J., No evidence for brown carbon formation in ambient particles undergoing atmospherically relevant drying, *Environmental Science: Processes & Impacts*, 22, 442 (2020).

- 7) Battaglia Jr., M. A., Weber, R. J., Nenes, A., \*Hennigan, C. J., Effects of water-soluble organic carbon on aerosol pH, *Atmospheric Chemistry and Physics*, 19, 14607–14620, <https://doi.org/10.5194/acp-19-14607-2019>, (2019).
- 8) Pye, H. O. T., Nenes, A., Alexander, B., Ault, A. P., Barth, M. C., Clegg, S. L., Collett Jr., J. L., Fahey, K. M., Hennigan, C. J., Herrmann, H., Kanakidou, M., Kelly, J. T., Ku, I.-T., McNeill, V. F., Riemer, N., Schaefer, T., Shi, G., Tilgner, A., Walker, J. T., Wang, T., Weber, R., Xing, J., Zaveri, R. A., and Zuend, A., The Acidity of Atmospheric Particles and Clouds, *Atmos. Chem. Phys.*, 20, 4809 – 4888, <https://doi.org/10.5194/acp-20-4809-2020> (2020).
- 9) Carlton, A. G., Pye, H.O.T., Baker, K.R., Hennigan, C.J., Additional benefits of federal air quality rules: model estimates of controllable biogenic secondary organic aerosol, *Environmental Science & Technology*, 52(16): 9254-5011 (2018).
- 10) Battaglia, Jr., M. A.; Douglas, S.; \*Hennigan, C. J., Effect of the Urban Heat Island on Aerosol pH, *Environmental Science & Technology*, 51, 13095-13103 (2017).

## SYNERGETIC ACTIVITIES

- K-12 Outreach – mentor for high school A.P. independent research projects (N. Singer, T. Shepard, J. Lui, S. Kohar); Committee for Indoor Air Quality (Howard County Public School System, Howard County, MD)
- American Association for Aerosol Research: *Particulars* Newsletter committee (2014 – 2016), Finance Committee member (2016 – 2019), Aerosol Chemistry working group Vice Chair (2020 - 2021), Aerosol Chemistry working group Chair (elect, 2021 – 2022), Student Poster Competition judge
- American Geophysical Union – Multiphase Chemistry symposium organizer
- Peer Review – Proposal reviewer for EPA, NSF, NASA, and NOAA; Manuscript reviewer for *Proceedings of the National Academy of Sciences*, *Science*, *Environmental Science & Technology*, *Atmospheric Chemistry and Physics*, *Geophysical Research Letters*, *Atmospheric Environment*, *Journal of Geophysical Research-Atmospheres*, *Aerosol Science & Technology*, *Atmospheric Measurement Techniques*, *Journal of Atmospheric Chemistry*, *Scientific Reports*, *Science of the Total Environment*, *Journal of Hazardous Materials*, and *Atmospheric Research*